

H. E. COY.

MACHINE FOR SWAGING SCREW-THREADS ON BOLTS.

No. 176,167.

Patented April 18, 1876.

Fig. 2.

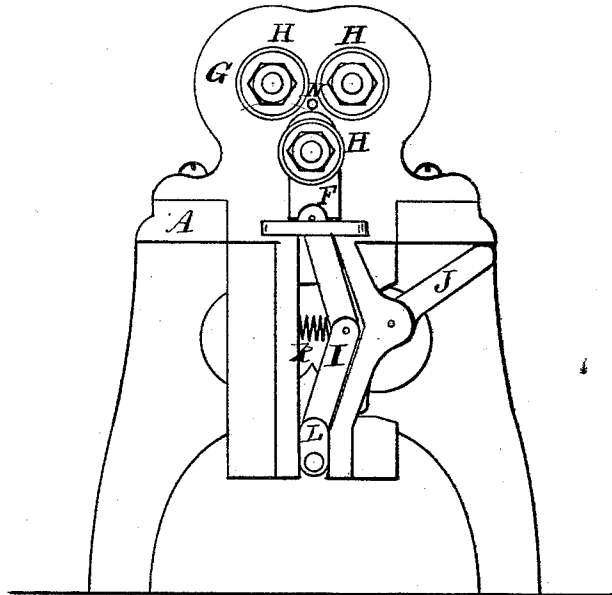
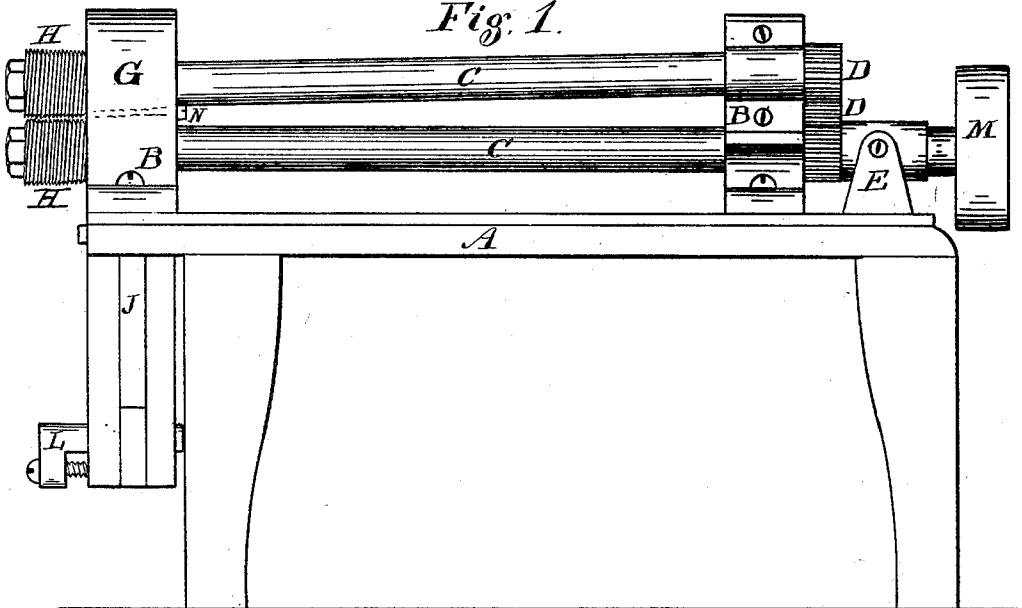


Fig. 1.



Witnesses

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UNITED STATES PATENT OFFICE.

HENRY E. COY, OF CLEVELAND, OHIO, ASSIGNOR TO CHARLES H. ROBISON,
OF SAME PLACE.

IMPROVEMENT IN MACHINES FOR SWAGING SCREW-THREADS ON BOLTS.

Specification forming part of Letters Patent No. **176,167**, dated April 18, 1876; application filed
November 5, 1875.

To all whom it may concern:

Be it known that I, HENRY E. COY, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a Bolt-Threading Machine, of which the following is a specification:

This invention relates to a machine for making screw-threads on bolts; and consists of three revolving threaded dies, attached to the end of three shafts, arranged in suitable bearings, and operated by gear, in such a manner that by placing the end of a heated bolt-blank between the said dies it will have instantly rolled upon it a screw-thread.

To enable others to fully understand my invention I will now proceed to describe the same in detail, with the aid of the accompanying drawing, in which—

Figure 1 is a side elevation, and Fig. 2 is an end elevation.

A represents a frame. B B are the supports for the shafts C C C, which are arranged to rotate in conjunction by gears and a pinion, D D. The lower shaft is set at the right-hand end, in a box pivoted between two short posts, E, the object of which is to allow the opposite end to be set in an adjustable box, F, in the head G, in the other end of the machine. The two upper shafts have their bearings in the said head G. H H H are revolving threaded dies, placed on the ends of the three shafts C C C. These dies consist of rollers, having screw-threads cut on them, which threads are cut from right to left around said rollers. The reason for this is, that screw-thread to be rolled on the bolt, to be a right-hand screw, requires those of the dies to be the opposite, or left-handed. The dies are larger than the bolt, and those now illustrated are four times the size of the bolt to be rolled, and have each

four threads, cut on what is termed "three pitch," for making twelve threads to the inch. For varying sizes of bolts the dies should be varied accordingly.

The adjustable box F is operated by a knuckle-joint, I, arranged in a hanger underneath the head G, there being a lever, J, pivoted in the side of the hanger, for operating the said knuckle-joint. A spring, K, operates in the opposite direction on the joint to keep the box F down. The lever J may be operated by a foot-treadle.

In the bottom of the hanger is fixed an adjuster, L, for regulating the throw of the said box F. A pulley, M, on the end of one of the shafts operates the whole set of shafts.

The operation of the machine is as follows: The roller-dies being set in motion, the operator takes a heated blank, and, placing it between the dies, lifts the lower die by the lever J, when the dies immediately gripe the blank, and, revolving it rapidly, roll or press a perfect screw-thread on it. The length of the thread thus rolled is regulated by a set-screw, N, in the head G.

Having described my invention, I claim—

1. The combination of the dies H H H, the shafts C C C, gears D D D, head G, supports B B, and the pivoted box E, substantially as and for the purpose described.

2. The adjustable box F, dies H H H, knuckle-joint I, lever J, spring K, and adjuster L, arranged in the hanger below the head G, for operating the lower die, substantially as described.

H. E. COY.

Witnesses:

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